

New Claims

1. A vibration damper for a tubular propeller shaft in the drive train of a motor vehicle having a mass body mounted concentrically in a sleeve by way of rubber spring elements, stop elements that limit the vibration travel of the mass body at least in the radial direction being arranged between the mass body and the sleeve, characterized in that
- flexible rubber stop elements (41, 42) are arranged - viewed in the circumferential direction - between the rubber spring elements (31) joining the mass body (51) and the sleeve (10), the stop elements (41, 42) extending over a relatively large circumferential angle as compared with the rubber spring elements (31) and filling up a large portion of the space (45) located between the mass body, the adjacent rubber spring elements (41, 42), and the sleeve (10).
2. A vibration damper for a tubular propeller shaft in the drive train of a motor vehicle having a mass body mounted concentrically in a sleeve by way of rubber spring elements, stop elements that limit the vibration travel of the mass body at least in the radial direction being arranged between the mass body and the sleeve, characterized in that
- flexible rubber stop elements (43, 44) are arranged - viewed in the circumferential direction - between the rubber spring elements (32) joining the mass body (53, 53) (sic) and the sleeve (16), the stop elements (43, 44) extending over a relatively large circumferential angle as compared with the rubber

spring elements (32); and that

- the mass body (51-53) and/or the sleeve (21-25) are configured locally [section by section], in mutually opposite regions - viewed in the circumferential direction - between the rubber spring elements (32, 43, 44), as stop elements (16) that limit the vibration travel of the mass body (52, 53) at least in the radial direction.

3. The vibration damper as defined in Claim 2, characterized in that the sleeve (15) has an undulating longitudinal profile, the rubber spring elements (32) being arranged in the undulation troughs (16) of the longitudinal profile, while at least a portion of the remaining undulation troughs (16) serve as stop regions.
4. The vibration damper as defined in Claim 1 or 2, characterized in that a sleeve (21) comprises two tube segments (22, 23) of different outside diameters joined to one another, the tube segment (22) having the greater outside diameter corresponding approximately to the inside diameter of the propeller shaft (1), while the tube segment (23) having the smaller outside diameter carries on its outer contour, by way of at least one rubber spring element (31), an at least locally annular mass body (51).
5. The vibration damper as defined in Claim 1 or 2, characterized in that a sleeve (25) fits in the axial direction around a mass body (51) mounted axially between at least two rubber spring elements (34, 35).

6. The vibration damper as defined in Claim 5, characterized in that the sleeve (25) has a tubular segment that transitions on both sides at its end faces into planar, disk-shaped regions (26, 27) to which the rubber spring elements (34, 35) are attached.
7. A vibration damper for a tubular propeller shaft in the drive train of a motor vehicle having a mass body arranged concentrically in the propeller shaft by way of rubber spring elements, characterized in that
- metal and/or flexible rubber stop elements that limit the vibration travel of the mass body at least in the radial direction are arranged between the mass body and the propeller shaft, the stop elements being arranged - viewed in the circumferential direction - between the rubber spring elements.
8. A vibration damper for a tubular propeller shaft in the drive train of a motor vehicle having a mass body arranged concentrically in the propeller shaft by way of rubber spring elements, characterized in that
- the mass body and/or the propeller shaft are configured locally, in mutually opposite regions - viewed in the circumferential direction - between the rubber stop elements, as stop elements that limit the vibration travel of the mass body at least in the radial direction.

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